Pacific Pile & Marine

Site Specific Health and Safety Plan
HASP

Jorgensen Forge Early Action Area Remediation

Index to Sections:

1.0 SCOPE OF WORK

For the contract, Jorgensen Forge Early Action Area, it is intended that Pacific Pile and Marine shall conduct dredging and upland excavation along the river shoreline of impacted soils and place cap materials and shoreline containment at the named location. The Jorgensen Forge facility sits on the Lower Duwamish River and within an EPA established superfund site. PPM's scope for this project will be dredging 12,550cy of in water sediment and excavating 3,500cy of bank excavations, then placing 13,870tons of backfill cap, 5,019ton of riprap material, and 3,313tons of habitat mix.

2.0 WORK PLAN

Refer to the R.A.W.P. – Issued for Construction package for a detailed project scope of work.

PPM shall mobilize to the site sufficient 40 Hour Hazwoper trained personnel and the following equipment:

- 1200 Hitachi Excavator
- PC1000 Komatsu Excavator
- 270 Hitachi Excavator
- 450 Hitachi Excavator
- JD 40ton Rock truck (2)
- JD 824 Loader (2)
- 218 LinkBelt Crane (for placing water treatment system on barge)
- Web Barge (dredge barge)
- KP 1,2,3 (sediment and cap barges)
- Flexi-Float Barge (for water treatment system)
- PPM Survey Boat
- Seiner Skiffs (2)
- Street sweeper
- Water truck
- 10,000lbs Forklift
- 36,000lbs Forklift

The Jorgensen property has housed steel-related industrial operations since the 1940s. Previous investigations at the site found high concentrations of PCBs, total petroleum hydrocarbons (TPH), arsenic, cadmium, chromium, lead and nickel in soils. Concentrations of TPH and metals exceeding cleanup levels have also been detected in groundwater at the Jorgensen property. As such, dredged sediments and saturated ground sediments from upland excavations that are loaded

onto sediment barges shall be dewatered and the effluent treated through a CESF (Chitosan Enhanced Sand Filtration) Treatment train before discharge. Dewatered sediments and debris shall be shipped downriver to PPM's 700 South Riverside Drive facility and trans-loaded to dump trucks for disposal at an approved facility (reference submitted R.A.W.P. appendix C, as well as the Transloading, Treatment, and Disposal Plan).

Sequence of work at the Jorgensen Forge Facility:

- Mobilize Personnel and Materials from 700 South Riverside Drive and initial site set-up
- Demolition and removal of non-sedimentary impacted materials
- Dredging and Initial 6" backfill
- Upland Excavation
- Backfill
- Shoreline Containment and Demobilization

3.0 GENERAL SAFETY REQUIREMENTS AND PROCEDURES

3.1 Introduction:

Pacific Pile and Marine, L.P. will maintain a safe work environment while working on the Jorgensen Forge Early Action Area Remediation Project. This will be achieved by planning for project safety before hazard assessment has begun at the project site. Our initial steps towards reaching this goal will be by acquiring the proper equipment and tools necessary for the work required to complete this project in a safe manner. All equipment will be inspected for any hazards and for necessary safety alarms, guards, seatbelts, etc. before beginning work. All tools will be checked for any defects. Each employee will be trained in those subjects appropriate to their job description and documentation will be kept. While on site there will be safety meetings each day to discuss possible hazards during that work day. The topics discussed will include but will not be limited to the subjects listed in this Site Specific Safety Plan. Topics, hazards, and mitigation measures will be captured on Task Hazard Analysis (THA) forms that are part of PPM's program of continuous safety improvement. The above will ensure that before our crew begins work on a particular site, they will be prepared to manage unforeseen site specific hazards that may occur. A sample copy of PPM's THA is attached with this submission.

The work falls under both 29 CFR 1926 Construction and 29 CFR 1915 Maritime Facilities regulations respectively. For this Site Specific Safety Plan we have reviewed the work location and listed what possible hazards may occur given the specific site conditions and have devised a plan to prevent these possible hazards from occurring.

3.2 Task Hazard Analysis (THA)

The THA is a process where the crew and supervisors identify: each work task; all recognized hazards for each task; and the control measures (engineering controls, administrative/work practice controls and PPE) to be implemented to eliminate or mitigate the recognized hazards in order to safely perform each task.

PPM has adopted utilization of THA's as part of a program to move forward with behavior based safety systems. The program provides for both personnel involvement in the development of a safety culture while producing valuable leading and trailing indicators to improve both safety as well as performance. All personnel attending to the project location will be challenged and asked to review and sign the daily THA form as a means of communicating recognized hazards on the site.

3.3 Work Permits

Pacific Pile and Marine shall review and comply with all permit stipulations for the scheduled work. PPM shall operate under approved SWPPP and King County Discharge permits as described in the Water Management and Treatment plans. Copies of the permits will be available for quick reference to the onsite PPM management.

3.4 Lifting and hoisting

Personnel and Structure Safety:

One of, if not the, most hazardous operations PPM engages in during the course of its work involves the use of large cranes. PPM has developed a crane and hoist safety policy that conforms to 29 CFR 1926.550 as well as USCOE EM 385.1-1 sec. 16.

Elements of the policy include:

- Reporting of any unsafe conditions to the subcontractor foreman or Project Superintendent immediately.
- A copy of operational procedures for the crane shall be available in the cab at all times.
- Access for entry and assembly of the crane shall be free from obstructions, underground hazards, and overhead power lines.
- During the assembly/disassembly of the equipment, the competent person must follow the manufacturers' instructions and prohibitions.
- Operational function, assembly/disassembly of crane equipment shall meet the requirements of the manufacturers' procedures, ANSI, ASME, and OSHA, and performed by a competent person.
- Crane equipment shall have the required inspection and proof load testing certificates current and available upon arrival at the job site.

- Lifting beams (commonly known as “spreader bars”) shall conform to ANSI B30.20, 1985 regulations which requires the following permanent markings:

    - Manufacturer’s name
    - Serial number (ID #)
    - Weight of the bar if over 100 lbs.
    - Rated load 5.5. Initial Proof load testing at 125% of the lifting beam’s capacity.

- Proof of initial load testing shall be provided for all lifting beams. Load test shall not exceed 125% of the rated load.
- Engineering data shall be provided to management on all specialized below-the-hook lifting devices.
- No crane shall be operated near high voltage as follows:
    - Up to 350kv 20 Feet
    - Over 350KV 50 Feet
- No loads shall be lifted over personnel.
- No one shall place their hands or any other portion of the body under a load suspended by the crane.
- No unauthorized personnel shall be working within the lifting area of the crane.
- Yellow caution tape shall be used to prevent personnel from entering the crane rotation area.
- All personnel shall be clear of crawler tracks while the crane is moving.
- All personnel except for the operator and oiler shall be clear of the crane rotating area during its operation.
- A designated signal person shall be provided if the operator’s view is obstructed, if site specific safety concerns require it or if the operator determines that it is necessary.
- The signal person shall provide direction to the operator using the standard hand signals or radio communications that are common to the industry. The lifting area encompasses that area where the boom is likely to swing over during the lift. This area should be clear of any person who is not directly involved with the lifts being performed.
- Operation of crane equipment by persons designated as the oiler shall be conducted under the direct supervision of an experienced operator during non-critical lifts. Where such lifts are conducted, notice shall be given to all employees working with the crane equipment.

  Note : Direct supervision requires the experienced operator to be present at the operator’s station during all lifts.

- No lifts shall exceed 75% of the manufacturer's load rating unless a written critical lift plan has been submitted and preapproved. Where tilt-panels panels are being lifted, no lifts shall exceed 85% of the manufacturer's load rating unless a written critical lift plan has been submitted and preapproved.
- The manufacturer's load chart shall be affixed to the crane or located in the operator's cab accessible to the operator.
- All lifts and crane configurations shall be consistent with the manufacturer's requirements and load charts.
- Per manufacturer's specifications, when pick and carry operations occur, the ground shall be smooth, level, and compacted, free from obstructions, underground hazards, graded and drained, so that in conjunction with support materials the crane is level. Also the site, if possible shall be clear of overhead power lines.
- No cribbing shall be placed under the crane axle, frame, or out rigger extension beams.
- Jib and boom shall be free from structural damage that exceeds the manufacturer's maximum allowable tolerances.
- Anti two-blocking device shall be functional and operational on all cranes equipped with such device.(*All cranes that are operated in states where anti-two blocking devices are required shall be equipped in accordance with* that state's standards)
- A load indicator shall be on all load lines in use on mobile cranes that exceed 50 tons rated capacity or 200 feet of boom.
- An electronic boom angle indicator shall be provided on all hydraulic cranes exceeding 15 tons rated capacity or a 60 feet boom length.
- No crane shall be operated in wind speeds that exceed 35 mph or the manufacturer's recommendations whichever is the lesser wind speed.
    - Where surface area of material being lifted creates a sail affect, the crane may be required to cease operating at lower wind speeds than stated.
    - Where possible, the wind indicator shall be properly affixed to the crane boom. Hand held anemometers shall be used as a back-up
    - With measured wind speeds of 20 mph, the crane operator and project superintendent will halt operations and assess the safety of the operation moving forward per EM 385.1-1 sec 16.
- Safety devices must be in proper working before operation begins.
- No person shall disable or circumvent a safety device while the crane is performing lifting service.

Operators shall comply with the following rules while operating the cranes and hoists:

- Do not engage in any practice that will divert your attention while operating the crane.
- Respond to signals only from the person who is directing the lift, or any appointed signal person. Obey a stop signal at all times, no matter who gives it.
- Do not move a load over people. People shall not be placed in jeopardy by being under a suspended load. Also, do not work under a suspended load unless the load is supported by blocks, jacks, or a solid footing that will safely support the entire weight. Have a crane or hoist operator remain at the controls.

- Ensure that the rated load capacity of an individual hoist, or any sling or fitting is not exceeded. Know the weight of the object being lifted or use a dynamometer or load cell to determine the weight.
- Avoid side pulls. These can cause the hoist rope to slip out of the drum groove, damaging the rope or destabilizing the crane or hoist.
- To prevent shock loading, avoid sudden stops or starts. Shock loading can occur when a suspended load is accelerated or decelerated, and can overload the crane or hoist. When completing an upward or downward motion, ease the load slowly to a stop.

3.5 Working over Water

Work conducted on piers and wharfs as well as off of barges qualifies as "work over water". As such, PPM personnel engaged in this project will be required to don USCG approved life vests or personal flotation jackets while on the deck of the barge or within 25 feet of the leading edge of a wharf structure (such as the facility located at 700 South Riverside Drive). Also present as personal protective devices will be at a minimum of two (2) life rings with at least 90ft. of rope attached.

Additionally, during operations, two rescue boat/skiffs will be deployed within the work area. The barge to be utilized on this project is so equipped.

3.6 Vehicle Safety

PPM maintains a detailed vehicle operation policy that directs employee operation of company owned vehicles. Within this project there will be only minor use of passenger vehicles, however the following principles will be adhered to:

All employees shall read and comply with the Company Policy.

- Before driving Company vehicles or other equipment, conduct a 360 degree walk around of the vehicle; check oil level, brakes, head & taillights and turn signals.
- Wear seat belts at all times.
- Do not exceed 15 miles per hour, or the posted speed limit at job-sites.
- Do not exceed posted speed limits.
- Do not drive trucks or other vehicles requiring a Commercial Driver's License (CDL) unless you hold a valid CDL.
- Do not allow passengers on running boards, in or on truck beds or on equipment designed for one operator.

3.7 Hand Tools

All hand tools should be inspected before use. Broken or defective tools should be repaired before use, or discarded; storage and proper housekeeping of tools when not in use is required. When conducting work, it is necessary to select and use the proper tool for the job. Screwdrivers and wrenches were not intended for, and should never be used as hammers. Always use tools for

their intended purpose. Should the proper tool not be on site, contact the project foreman or superintendent to obtain it rather than improvising with another tool.

3.8 Heavy Equipment

Pacific Pile and Marine will have mobilized a sizeable complement of excavators, articulating dump trucks, a wheeled loader, and forklifts for use in this project. The following guidelines are necessary to follow while personnel are working around heavy mobile equipment:

- Never pass behind working equipment without first making direct contact with the operator
- Heavy equipment on the job site always has the right of way
- Never come between mobile equipment and its intended load
- Riding on the deck or ladder of mobile equipment is forbidden
- While working with heavy equipment, only one spotter should ever direct an operator at a time.
- Prior to working with heavy equipment, establish an agreed upon method of communication with the operator.

All lines used in operations should be inspected daily for cracks or leaks. All fittings must be inspected visually every day. Deficiencies shall be noted on inspection cards. Cracked and leaking lines or fittings must be repaired (in the field if possible) prior to equipment operations.

3.9 Trenching (Excavation)

The upland excavation work calls for the removal and backfill of approximately 3,500cy of material. The excavation of this material will open a large area along the shoreline of the facility. Shoring of the excavation on this project will not be necessary. Excavations must conform to the following parameters:

- Prior to any upland excavation, utility locates must be performed.
- Excavations greater than 4’ in depth of sandy, non-competent Type – C soils must have a shoulder to toe profile no greater than 1.5:1.
- Stairs, ladders, or ramped areas of ingress/egress must be present every 25 lineal feet.
- The perimeter of each excavation shall be demarcated with an appropriate barrier.
- Inspections shall be made by a competent person at the beginning of every shift.
- Excavated or spoil material may not be stockpiled at the shoulder of the excavation.

Special considerations for this excavation are addressed in the environmental hazards section of this document as the excavation is in a known contaminated site.

3.10 PPE

All personnel within the work area shall be required to follow mandatory guidelines for the use of personal protective equipment. At a minimum, the following guidelines for the selection and use of PPE shall be followed:

Clothing
While working, clothing shall, at a minimum, include long pants and a short-sleeved shirt. Torn or excessively loose clothing shall not be worn, due to the possibility of catching in machinery.

Eye Protection
Suitable safety glasses, goggles, face shields or hoods must be worn when:

- Chipping concrete.
- Using: grinders, table saws, chain saws, jack hammers, chipping guns, powder actuated tools, nail guns, cut-off saws, impact tools (including hammers), scalers, any air powered tools and when cutting and welding or using other tools or equipment that might produce flying debris, liquids or bright flashes.
- Wind conditions are such that dust and other material are airborne.
- Handling any materials in powder form, such as cement.
- Working with concrete or grout.
- Handling any type of sprayed materials whatsoever.
- Filing, abrading or buffing anything.
- Working in the presence of anyone whose work requires them to wear eye protection.

Always turn away from any welding activity. Severe eye injury can occur even when not looking directly at a welding arc.
Never allow non-medical personnel to attempt to remove foreign material from your eyes. Always immediately report an incident involving material in your eye to your supervisor for transportation to trained help. Prescription safety glasses may be available from the Company or from your union. Please contact your supervisor or the office for details.

Gloves
Company provided work gloves must be worn when handling any type of treated wood, metal with unfinished edges, wire rope and any other sharp or jagged materials. Specialized gloves (rubber, neoprene, etc.) shall be used when handling toxic materials. If you don't know the toxicity of a materials, look it up in the MSDS files maintained by your foreman or available at the office.

Hard Hats
All personnel at the job-site must wear hard hats, of a type issued approved under MSHA/NIOSH. Metal hard hats and "bump hats" will not be approved for use. Only personnel **working as Operators when inside the cabs of their machines** and **NOT working or passing, at any time, within the ultimate radius of an operating, or running, crane or other lifting machine or any other type of operating machinery** are exempted from this requirement.

Hearing Protection
Earplugs or other protection must be used when working in the vicinity of any noise above the level of a medium to loud conversation. This includes common air and electric tools, chain saws, motorized small and large equipment and heavy machinery.

Life Jackets
Before working over or on the water, all employees shall be wearing an approved Life Jacket. Employees working on bridges, floating equipment, dredges, barges, boats, skiffs, pontoons, floats and on or outside dock or pier bull rails shall wear approved life jackets. **Do NOT rip Life Jacket inner lining** for storage of files, paint-stick or other items. If life jackets become accidentally torn or damaged in any way, return them to your foreman for replacement.

Life jackets are expensive. Use only damaged ones for padding or cushions. Hang life jackets up. Do not leave them in skiffs or loose on deck.

Shoes, Boots and Other Foot Gear
Sturdy, heavy-duty work boots or work shoes are required. OSHA-approved safety footwear is preferred. No canvas shoes, loafers or cowboy-style boots will be permitted. For the purpose of this project, when entering the areas of excavation, disposable rubber "over-boots" shall be required.

Respiratory Protection
Although respiratory protection is not anticipated to be required on this project due to "wet method" engineering controls, an initial exposure assessment shall be conducted to make a final determination. Airborne exposure monitoring shall be conducted throughout the course of the project to ensure contaminant levels remain below exposure thresholds required to initiate the use of respiratory protection.

3.11 Incident/Accident Reporting

All injuries, accidents and environmental incidents, no matter how minor they may appear, must be reported as soon as they appear. This is to ensure that proper steps are taken to handle the situation for individual employee safety and that of other personnel as well as meeting regulatory requirements. .

For an injury requiring medical attention, the injured employee must be transported to the nearest medical provider. If an ambulance is not called, the jobsite supervisor or other employee should provide transportation to the injured person. *The injured must NOT be allowed to drive him/herself to the medical provider*.

It is the responsibility of the jobsite supervisor to interview witnesses and to document the incident on an Accident/Incident Report within 24 hours. The completed form can be faxed to 360-373-6335 or

delivered to the Environmental and Safety Director. If the supervisor is not near a fax or the office, they can contact a safety representative and dictate their report via telephone.

Call the police regarding an accident involving a Company vehicle or a privately owned vehicle used on company business. The driver must immediately report the accident to his/her supervisor. Additionally, accident reports and/or police citations must be provided to the Company.

All injuries and accidents are followed by a post-accident drug test. The results of this test and improper documentation of an incident may affect the level of coverage by the worker's compensation insurance.

Instructions for Reporting Emergencies

1. **Call 911**
2. **State your name and the Company name**
3. **Give a brief description of the accident or situation**
4. **Give exact location of the accident/victim**
5. **WAIT** – ask if you have given sufficient information; **LET THE PERSON YOU CALLED HANG UP FIRST**
6. **Contact Pacific Pile & Marine:**
   Pacific Pile & Marine 24-hour Telephone: 1-907-351-5570
7. Discuss only the nature of the injury itself with medical personnel

Instructions for Reporting Injuries

1. Report all injuries, no matter how slight, to your foreman immediately for proper first aid or medical attention. Even the slightest scratch should be treated to avoid infection or tetanus.
2. Contact the office immediately in the event of serious injury. Refer all questions to the office.
3. For all injuries, job-site foreman must record details of incident, listing witnesses, environmental factors, and time of day and sequence of events. Copies of an accident reporting form are contained within the foreman's field book.

First Aid Kit Locations

Office Trailer

First aid cabinet mounted on wall.

Crane Barge

On bulkhead in lunch room

Spills

PPM strives to maintain a high level of environmental awareness. We work closely with clients and Federal, State and local environmental agencies to identify potential environmental hazards and to plan ways to mitigate the effects of our operations.

Each employee plays an important part in environmental protection. Safe operating procedures, jobsite organization, cleanliness and actively identifying areas for improvement all help to reach this goal. If an incident occurs on the jobsite that has the potential to damage the environment or

public health, no matter how minor, it must immediately be reported to the supervisor. Spills of any nature or size must likewise be reported immediately.

3.12 Equipment and Materials Loading/Unloading

Various load lifting equipment and activities will be required for mobilization, demobilization and during construction activities on site.

- Comply with the load lifting equipment manufacturer's operating instruction manual.
- Personnel on the ground and in vehicles must ensure that equipment/load lifting operators are aware of their presence before entering the equipment/load lifting work area.
- Equipment shall not be overloaded to reduce the potential for accidents and risk of loss.
- Personnel signaling equipment operators shall be positioned within continuous sight of the operator, but outside of any potential pinch point or crushing impact area in the event a load falls or is inadvertently dumped.
- The equipment operators will ensure that their driving/working surface and operations are in compliance with the equipment manufacturer's requirements and site operating conditions to ensure that there is no uncontrolled loss of load or overturning.

3.13 Environmental Hazards

The project location, Jorgensen Forge, is known for specific environmental hazards. The work will occur within the perimeter of an established superfund site with various contaminants of concern above federal clean-up levels. Known contaminants include PCB's, TPH, Cadmium, Arsenic, Chromium, Lead, and Nickel. Impacts to the area are in both soils and groundwater.

Pacific Pile and Marine has contracted the services of an environmental monitoring and laboratory firm to provide an Industrial Hygienist to conduct initial exposure monitoring and generate an Initial Exposure Assessment. Based on the results of that IEA, PPE requirements for personnel may be adjusted. Sample and analysis documentation for the site as provided by Anchor QEA matches the published EPA determinations for high levels of contaminants from the standpoint of clean-up levels, however these levels still remain short of permissible exposure limitations (PEL's) as defined by OSHA.

PPM personnel that shall be engaged on this project have been selected on the basis of experience, competency, and certification under the 29 CFR 1910.120 Hazwoper Standards.

The work area shall be demarcated according to industry best practices standards which shall include a work zone (hot zone), decontamination zone (contamination reduction zone, or CRZ), and a clean zone. Equipment entering the work zone shall remain within the work zone until properly decontaminated.

Decontamination

All equipment and materials coming in contact with impacted soils, water, or debris, must undertake decontamination prior to leaving the work zone. Decontamination procedures shall be conducted as follows:

Upland Decontamination

- Personnel shall construct decontamination basins at equipment access and egress points within the CRZ. The basins shall be so configured as to permit heavy equipment to enter and rest without tracks, treads or heavy wheels penetrating a waterproof membrane forming the basin.
- Utilizing a "hotsie" pressure washer equipped with a detergent/surfactant additive reservoir, heavy equipment will be sprayed to remove all soils and sediments on the entirety of the equipment.
- The detergent of choice shall be a water/Alconox™ mixture.
- Personnel conducting decontamination operations shall utilize appropriate PPE, i.e. rain gear, rubber gloves, and face shields.
- Sediments and run-off decontamination water shall be pumped out of the decontamination basins and treated through the third party treatment system.
- At the close of operations, components of the decontamination basins shall be collected and disposed of as contaminated debris within the approved Waste Stream Management system.

Dredge Decontamination

- Heavy equipment and barge decks utilized for dredging and transporting contaminated materials shall be pressure washed in the same fashion as upland equipment.
- Barges shall be equipped with a third party water processing system.
- Collected rinse water on the barge decks shall be processed through the on board water filtration system and discharged.

Personnel Decontamination

- Personnel entering the work areas, or boarding barges, shall don disposable rubber over boots.
- At the entry and exit points between the work zone and the CRZ, disposal stations shall be pre-placed. Personnel exiting the work zone shall remove PPE and deposit it in these disposal bags for collection and disposal as contaminated waste.
- Personnel disembarking from work and disposal barges shall deposit disposable PPE within pre-placed disposal bags for disposal as contaminated waste.
- Hand washing stations shall be emplaced at the egress points of the work zone.

3.14 Hot Work

Although PPM's scope of work does not involve cutting, torching, or welding of any kind, incidental torching or welding may occur on the assigned PPM barge in the support of operations. PPM has established a hot work program compliant with all Federal, State, and City of Seattle regulations.

3.15 Hazardous Awareness/MSDSs

Our Company complies to the OSHA Hazard Communication Standard, Title 29 Code of Federal Regulations 1910.1200 and 1926.59, by compiling a hazardous chemicals list, by using MSDS's, by ensuring that containers are labeled and through providing our employees with training. This program applies to all work operations in our Company where employees may be exposed to hazardous substances under normal working conditions or during an emergency situation. The Company Safety Director, as the acting representative of Pacific Pile & Marine, is responsible for implementation of this program. Additional copies of the program are available in the office. Under this program, employees will be informed of the contents of the Hazard Communication Standard, the hazardous properties of chemicals with which you work, safe handling procedures and measures to take for protection from these chemicals. Additionally employees will be informed regarding hazards associated with non-routine tasks, such as the cleaning of reactor vessels and the hazards associated with chemicals in unlabeled pipes.

List of Hazardous Chemicals
The Safety Director will develop and maintain a list of all hazardous chemicals and related work practices used at work. The list of chemicals is included in this safety manual and will be updated periodically. MSDS sheets for chemicals brought to the worksite by PPM shall be compiled and submitted during mobilization as the specific job trailer and barge has not yet been fitted out.

Materials Safety Data Sheets (MSDS's)
MSDS's provide specific information about the chemicals in use on the job. The Safety Director will maintain in his/her office a binder of MSDS's (consisting from an OSHA form 174 or equivalent provided by the supplier) for each of the substances on the list of hazardous chemicals. Additionally, each crew foreman will maintain an MSDS book at the job-site, usually in his/her pickup truck.
The Safety Director is responsible for acquiring and updating MSDS's. He/She will contact the chemical manufacturer or supplier if additional research is necessary or if an MSDS has not been supplied with an initial shipment. ***The Safety Director must be informed of all new procurements for the Company.***

Labels and Other Forms of Warning
The Safety Director will ensure that all hazardous chemicals at the yard and in the field will be properly labeled and updated. Labels should list the chemical identity, the appropriate hazard warnings and the name and address of the manufacturer, importer or other responsible party. Foremen are responsible for labels on all containers utilized at job-sites. If chemicals are

transferred from a labeled container to a portable container that is intended only for immediate use, no labels are required on the portable container. Pipe and piping systems encountered at individual job-sites may not be labeled, but contents will be described by the job foreman in the job-site safety orientation meeting.

Non-routine Tasks
When required to perform hazardous non-routine tasks (for example cleaning tanks, entering confined spaces, demolishing piping systems) a meeting will be held to inform involved employees regarding the hazardous chemicals that may be present and the proper precautions to take to avoid exposure.

Training
Yard, office and field personnel who work with, or may be exposed to, hazardous chemicals will receive initial information and training on the Hazard Communication Standard and the safe use of the hazardous chemicals, including the following elements:

- Operations that involve the use of hazardous chemicals
- Location and availability of the written program, including MSDS's and the list of hazardous chemicals
- Methods and observations that may be used to detect the presence or release of hazardous materials
- The physical and health hazards of the chemicals in the work area including the likely physical symptoms or effects of overexposure.

Subcontractors / Other Employers
Employees of other contractors working at sites where Pacific Pile & Marine is acting as general contractor will be provided access to MSDS files maintained by the job foreman, either in a job trailer or in the foreman's vehicle.

The Pacific Pile & Marine job-site foreman is responsible for notifying the responsible subcontractor supervisor or job foreman of any chemical hazards that may be encountered in the normal course of their work on the premises, the labeling system in use, the protective measures to be taken, the safe handling procedures to be used and the location and availability of MSDS's. Each contractor bringing chemicals on-site must provide the Pacific Pile & Marine job-site foreman with the appropriate hazard information on these substances, including the labels used and the precautionary measures to be taken when working with these chemicals.

4.0 SITE SPECIFIC JOB HAZARD ASSESSMENT/REMEDIATION

Location: 700 South Riverside Drive and Jorgensen Forge Early Action Area, Lower Duwamish River, Seattle WA.

4.1 Mobilization and initial site set up

Primary hazards associated with mobilization and set up on site relate to congestion on the barge deck and personnel exposure to pinch points, crushing hazards, as well as falling or being knocked overboard. Slips, trips and falls aboard barges and deck locations present a consistent hazard.

Upon assuming control of the site from the owner, PPM shall establish control points and demarcation necessary to restrict entry to non-project associated personnel.

While on deck, personnel will be equipped with bright, reflective personal flotation devices which serve the purpose of protection from drowning prior to individual recovery, as well as heightened visibility on the wearer. During operation on-loading and offloading material via crane, all personnel will remain clear of the crane counter weight. Only one member of the crew will communicate with the crane operator during on-loading and off-loading. Tag lines will be utilized for suspended loads in transit on and off the barge. The primary use of the crane for the purposes of this project shall be to on-load, and offload the third party water treatment system.

Beginning with mobilization and continuing through the entire project, no work will occur without the presence of a safety skiff for personnel rescue. Likewise, during operations, a minimum of two life rings will be present and placed in conspicuous locations.

Upland excavation areas shall be surveyed and marked by third party surveyors. PPM personnel shall erect bright fencing to demarcate the limits of the contaminated work area, the CRZ, and the beginning of the clean area. Lay down areas shall also be demarcated. Communication of lanes of travel and equipment locations shall be conveyed to the client.

On-loading and offloading of upland heavy equipment shall involve the use of spotters. All straps, chain binders, chains and fasteners shall be inspected prior to use. When securing and un-securing straps and chains, personnel shall not toss fasteners blindly over trailers.

4.2 Demolition and removal of non-sedimentary impacted materials

Once assembled, work activities will commence with the mechanical removal of impacted debris on the upland portion of the project. At no time will PPM personnel physically handle contaminated debris, pile, or other waste taken from the site. PPM ground personnel shall remain outside of the established travel paths of heavy equipment. The patterns for each day's activities shall be established and discussed in each morning meeting. Waste will be collected through

mechanical means and deposited in open top dump trucks for removal to an approved disposal location. Prior to departure from the Jorgensen Forge location, debris trucks shall cover their loads. At this point in the project, equipment entering the work zone shall remain within the demarcated limits of the work area until decontaminated at the demobilization of the project.

During this phase of the work, PPM ground personnel shall construct equipment decontamination areas within the CRZ. Work shall require the use of basic hand tools and hand tool safety measures shall apply in conjunction with PPE requirements for those tools.

During this phase, as with all subsequent phases of this project, all visitors must be escorted. Visitors requiring or requesting "unescorted" access to the project worksites will be limited to a case-by-case basis as approved by the PPM Foreman.

4.3 Dredging and Initial 6" backfill

Principal hazards associated with this phase of the work relate to personnel exposure to very heavy equipment and work over water. During dredging operations, two support skiffs will be deployed for the purpose of both barge repositioning as well as safety for personnel. As stated previously, all personnel working on the water, either on the barges, within the support boats, or on wharves and docks, must wear USCG approved personal flotation devices. Life rings must be positioned on barges every 90 feet and each life ring must be equipped with no less than 200' of line.

At no time shall personnel on the dredge barge approach the operating dredge. Deck personnel shall be restricted from transit in the swing radius of the dredge during any operation. Communications with the operator of the dredge shall be made through the use of UHF radio. No unassigned personnel shall board either the dredge barge or the waste barges.

Offloading of dredged materials shall be conducted at PPM's 700 South Riverside Drive location where contaminated sediments and waste shall be trans-loaded from barges to trucks for disposal at the approved waste facility. During trans-loading, material shall be moved from the barge to waiting trucks sitting on a containment apron by mechanical bucket. Between the barge and the shore facility, a catchment basin will be put in place to collect any migrant sediments and prevent the spread of contamination.

Upland Excavation and Backfill

Hazards associated with this phase of the work primarily relate to personnel operating around heavy equipment, traffic control, and the migration of contaminants outside of the work zone.

Travel paths of heavy equipment within the work zone shall be updated daily and conveyed to all personnel in the morning safety meeting. Ground personnel shall at no time, cross within the blind spot of operating equipment. All ground personnel (as well as operators) shall don

appropriate reflective vests and other standard “level D” PPE while on the project site. Access to the work area through the Contamination Reduction Zone (CRZ), shall be strictly controlled. All communication with operators shall be through UHF radio with communication protocols established at the initial kick-off meeting and updated daily.

Trucks utilized for the disposal of debris and sediments shall follow a one way traffic pattern. These trucks shall not enter the work zone, and therefore not require decontamination on each rotation. The disposal dump trucks and pup trailers shall be loaded within a pre-established loading zone adjacent to the work zone, but within the CRZ. That loading zone will be constructed to retain migrant debris and sediments and prevent gross contamination of the CRZ and vehicles/equipment within that area.

During backfilling operations, all traffic patterns will follow the protocols established during the excavation of contaminated materials. Clean cap material shall be stockpile at the edge of the work zone just within the perimeter for distribution and spreading.

All personnel entering the work zone shall don disposable rubber over boots. Upon exiting the work zone, the boots are to be removed within the CRZ and disposed of as contaminated waste.

Demobilization

The first task of demobilization shall be the decontamination of all equipment that came in contact with impacted soils, sediments, water, and debris, according to the protocols established in section 3.13 of this document. Personnel shall don appropriate PPE for this task, which shall be disposed of at the completion of work within the waste stream. All rinse water shall be treated with the on-site, third party water filtration system and discharged.

Principally, at the end of a project, a higher risk exists for incidents and injuries to occur due to complacency. Even during demobilization, daily toolbox meetings will utilize the THA tool to describe work activities and attempt to capture potential risks to personnel. Strong emphasis must also be placed on proper housekeeping at the work site and in the stowage of tools, equipment, and materials.

Internally, all THA’s inspection reports, and toolbox topics will be reviewed and a “lesson’s learned” assessment will be conducted.

5.0 EMERGENCY ACTION PLAN

Incident reporting requirements contained within this document in section 3.11 will be presented to all personnel during the kick-off meeting. Likewise, all personnel shall be instructed as to the facility alarm system during that initial meeting.

For facility wide emergencies, personnel shall evacuate both the barge and work area and proceed to the muster point at the PPM office trailer. There, a headcount will be taken. Prior to

the kick-off of work activities, all personnel will be briefed by Jorgensen Forge personnel as to the established facility protocols.

EMERGENCY CONTACT NUMBERS

General Emergency	**911**
Boeing Field Airport Fire and Rescue	**206-269-7392**
American Medical Response, Tukwilla	**206-444-4440**
JC Clark, PPM Project Manager	**206-300-1312**
Joseph Adami PPM HSE Director	**907-351-5570**
PPM Foreman	
Client Contact	

7.0 APPROVALS

This SSSP is acceptable for field implementation as indicated by email approval from and/or signature of the following personnel below:

_____ _____

PPM HSE Director Date

_____ _____

PPM Project Manager Date

7.1 ACKNOWLEDGEMENT FORM

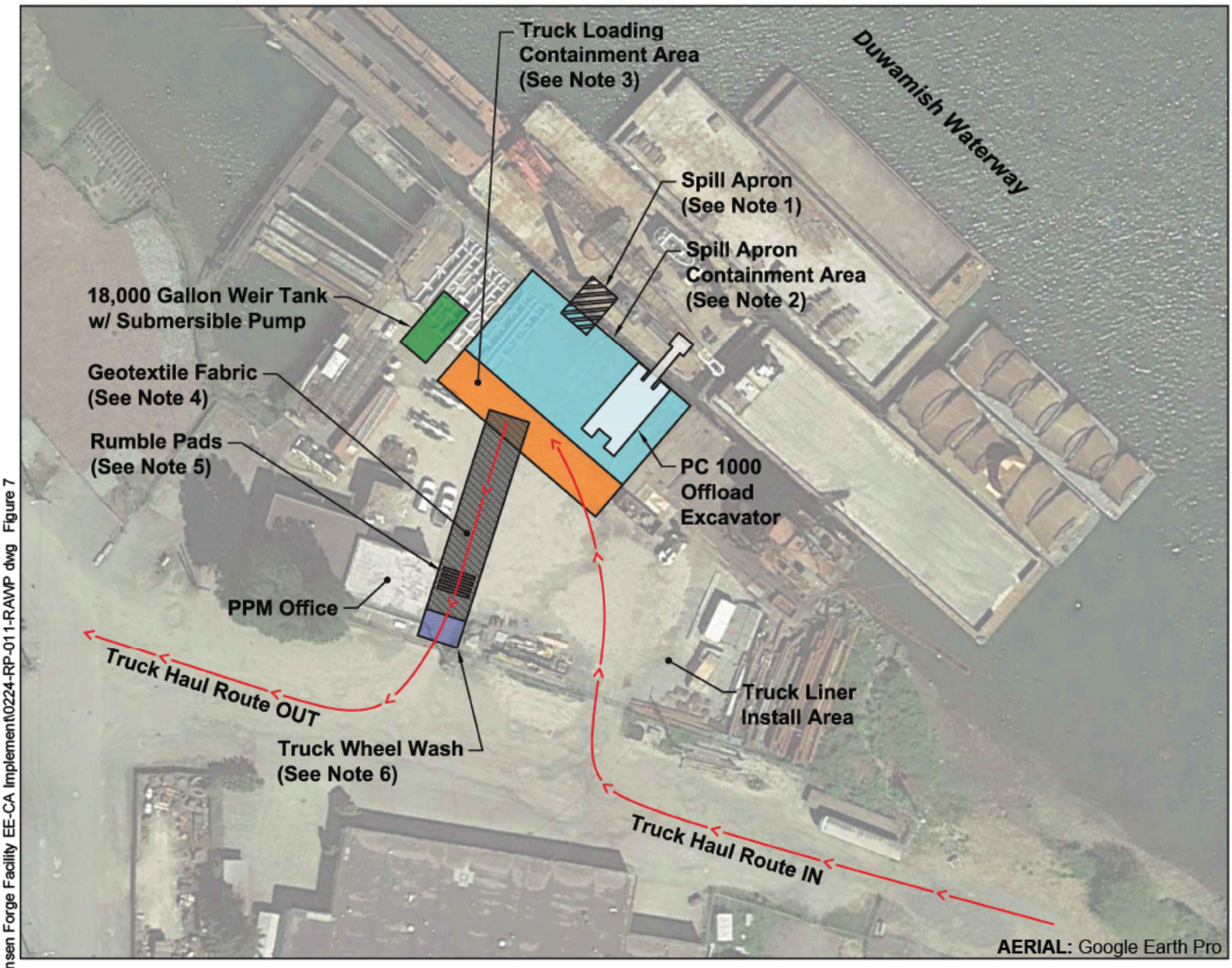
Site Specific Safety Plan Acknowledgement

My signature indicates that I have read and understand the Site Specific Safety Plan written for this project. I understand that this is part of an ongoing training effort and I was given the opportunity to ask questions to ensure my full understanding of what was addressed. I acknowledge and accept the written policies and/or procedures written. Failure to comply with the DOSH/OSHA safety rules, this Site Specific Safety Plan, and Pacific Pile & Marine, LPs Safety Program and policy and procedures, will lead to disciplinary action such as removal from the job site, suspension from work and potential of termination of my employment.

Date	Printed Name	Signature

Date	Printed Name	Signature

ATTACHMENT A
Site Map



NOTES:

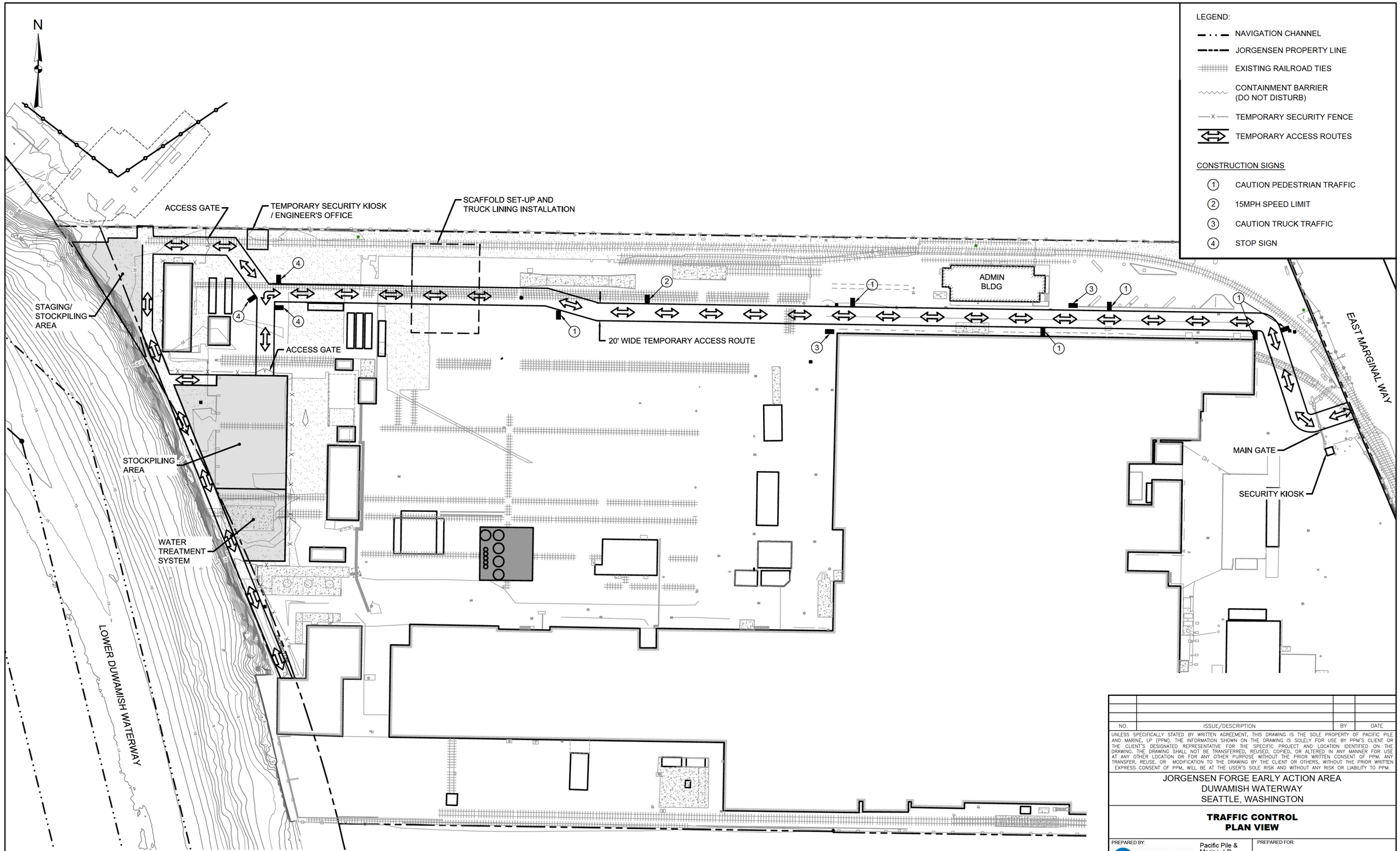
1. Spill Apron is constructed of steel and is 16'w x23' long with 12" high sides. The apron is angled to the barge and containment area to capture any fallen pieces of material from the excavator bucket during transfer from the barge.
2. Spill Apron Containment Area will be 50'x100' long. It will be constructed with a one-high ecology block wall around all four sides. A 20mil PVC liner will cover the entire containment area and will be draped and fastened over the wall. A layer of crushed rock will be placed over the PVC liner to protect it from wear and tear. Steel road plates will be placed on top of the crushed rock to facilitate cleaning operations.
3. Truck Loading Containment Area will be 20'x100'. It will be constructed of a 6" gravel berm around all four sides. A 20mil PVC liner will be placed over the gravel berm. Crushed rock will be placed over the liner to protect it from truck traffic. Steel road plates will be placed on top of the crushed rock to facilitate truck movements and cleaning operations.
4. A 20'x100' section of geotextile fabric will be placed down to remove any fine sediments from truck wheels. The fabric will be placed daily or as needed to ensure the fabric is functioning properly.
5. Two sets of steel rumble pads will be utilized to remove any sediment from truck wheels before the trucks proceed onto the geotextile fabric.
6. An above ground temporary wheel wash system will be installed at the exit of facility for a final wheel cleaning.

0 80
Scale in Feet

Apr 04, 2014 11:11am tgriga K:\Projects\0224-Farallon Consulting\Jorgensen Forge Facility EE-CA Implement\0224-RP-011-RAWP dwg Figure 7

ANCHOR QEA

Figure 7
Pacific Pile & Marine TTD Facility Plan
Removal Action Work Plan
Jorgensen Forge Early Action Area



NO.	ISSUE/DESCRIPTION	BY	DATE

JORGENSEN FORGE EARLY ACTION AREA
DUWAMISH WATERWAY
SEATTLE, WASHINGTON

TRAFFIC CONTROL PLAN VIEW

PREPARED BY:
Pacific Pile & Marine
Pacific Pile & Marine, LP
Seattle Office
582 South Riverside Drive
Seattle, WA 98108

PREPARED FOR:
EARLE M. JORGENSEN COMPANY

PROJ MGR: JC	REVIEWED BY: JC	CHECKED BY: JC	FIGURE 2
DESIGNED BY: JC	DRAWN BY: JC	SCALE: AS NOTED	
DATE: 03/14/2014	PROJECT NO.	REVISION NO. 0	SHEET NO. 1 OF 1

ATTACHMENT B
Resume of Preparer

JOSEPH ADAMI, HSE Manager

SKILLS SUMMARY Mr. Adami has more than 17 years experience in Project Management and Engineering, Technical Industrial Hygiene work, and HSE Management. Mr. Adami coordinates a company-wide Safety & Health Program to ensure compliance with applicable laws and regulations. His main objective is to foster a culture with an objective of an incident free, injury free safety record by encouraging safe work practices through training, regular site visits, and weekly Safety Meetings with Superintendents and Foreman.

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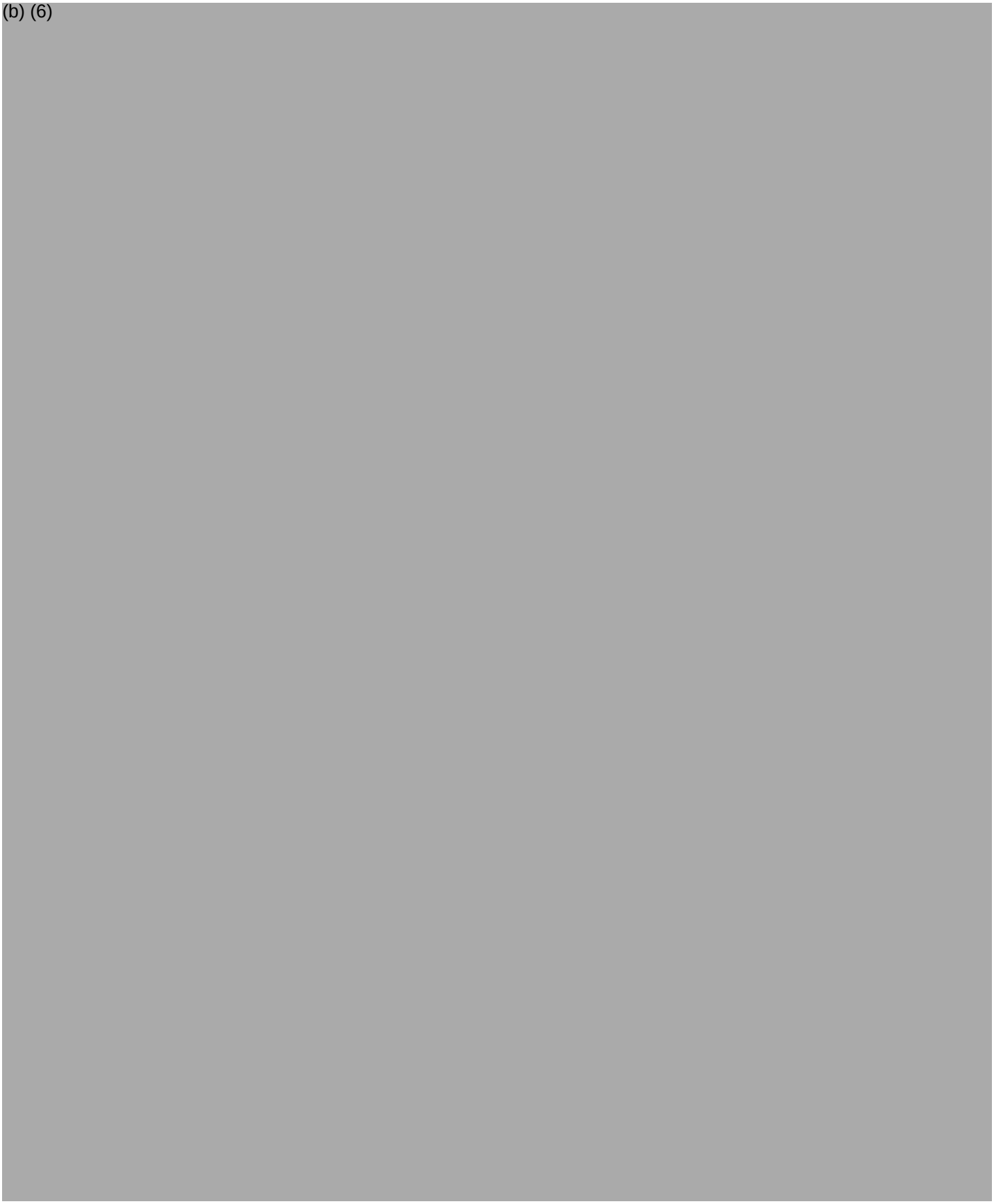
(b) (6)



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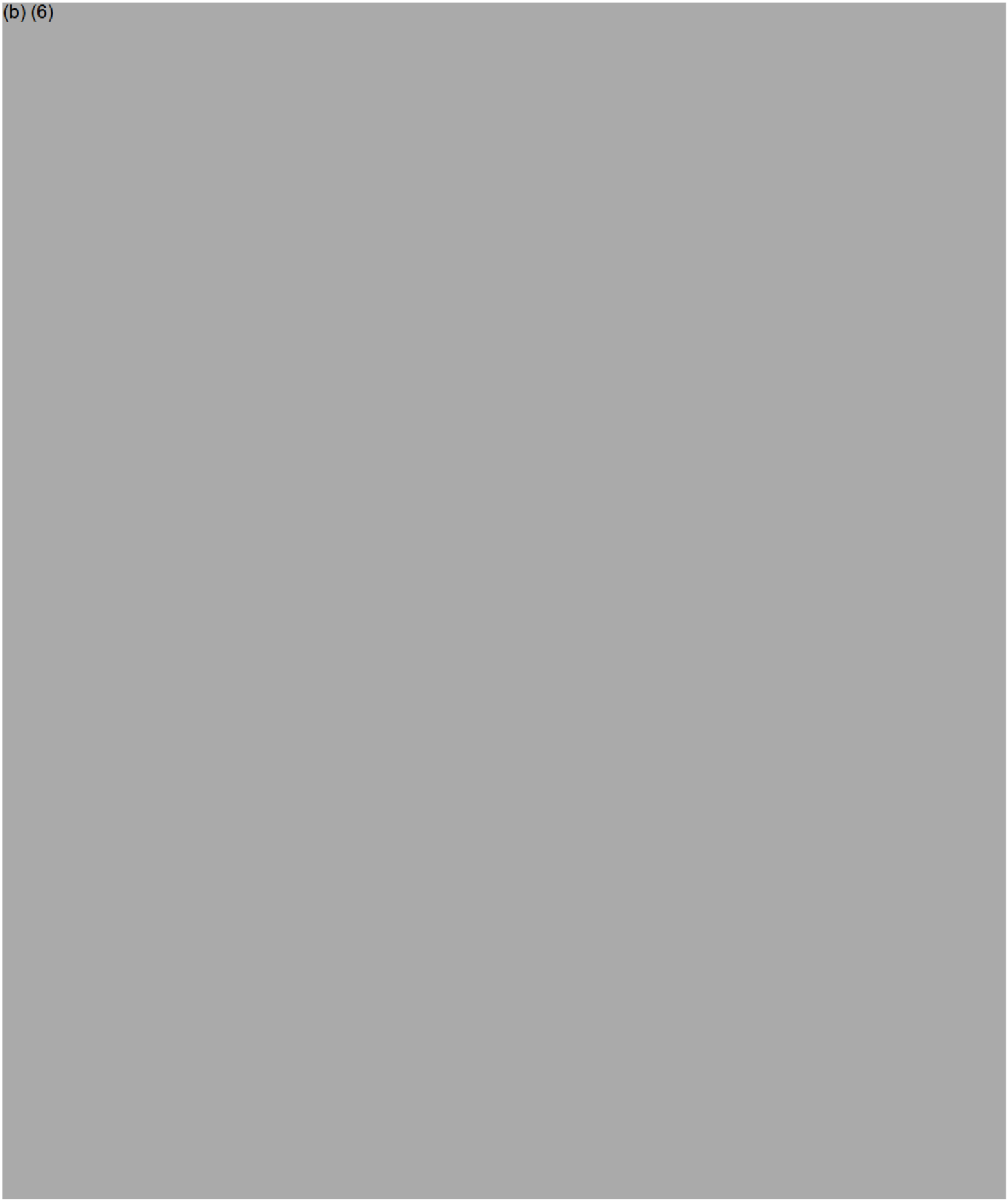

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